

FIG. 1



Title: OPHTHALMOLOGIC APPARATUS
 Inventor(s): Toshifumi MIHASHI et al.
 Appl. No.: 10/758,285
 REPLACEMENT SHEET

2 / 22

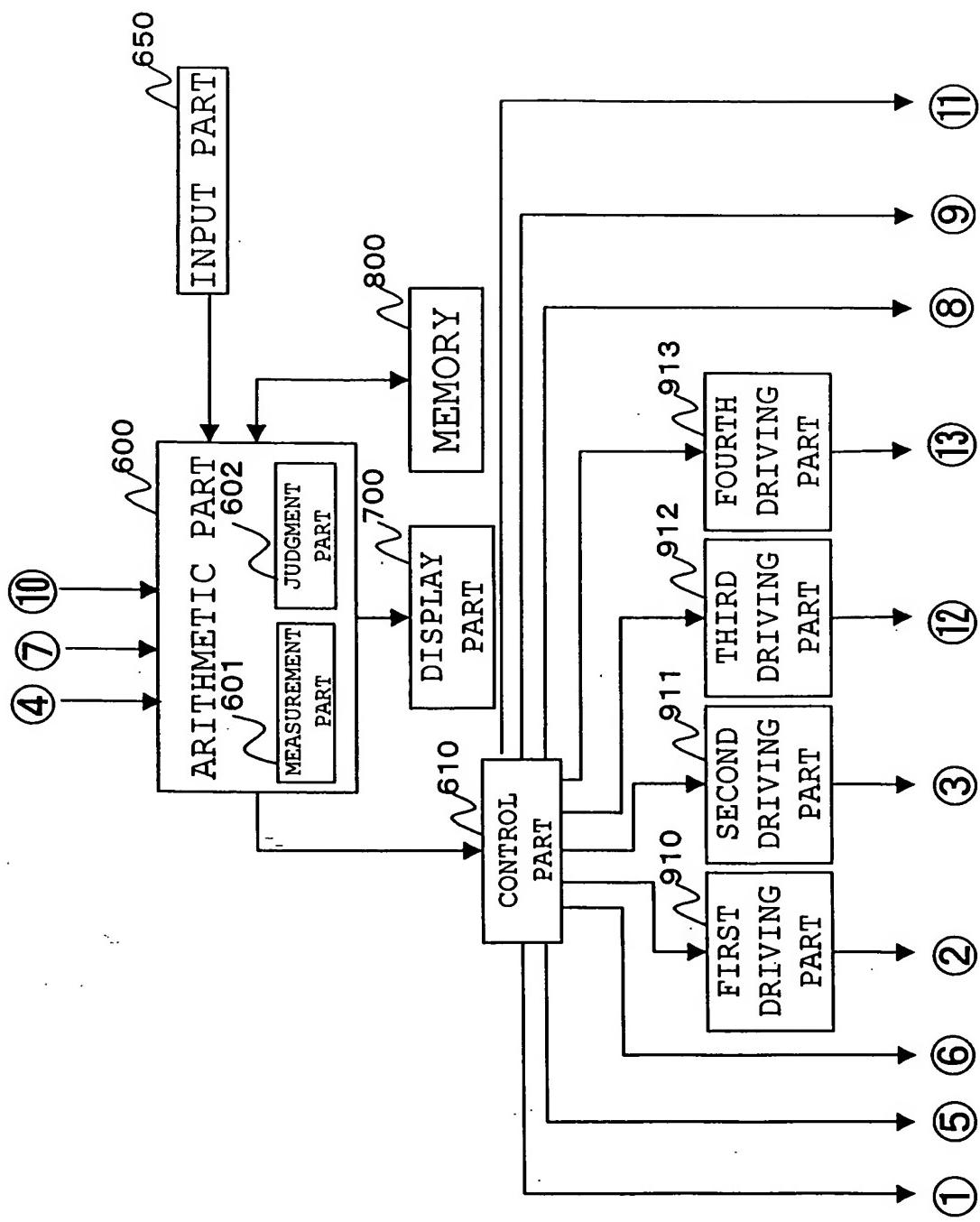


FIG. 2

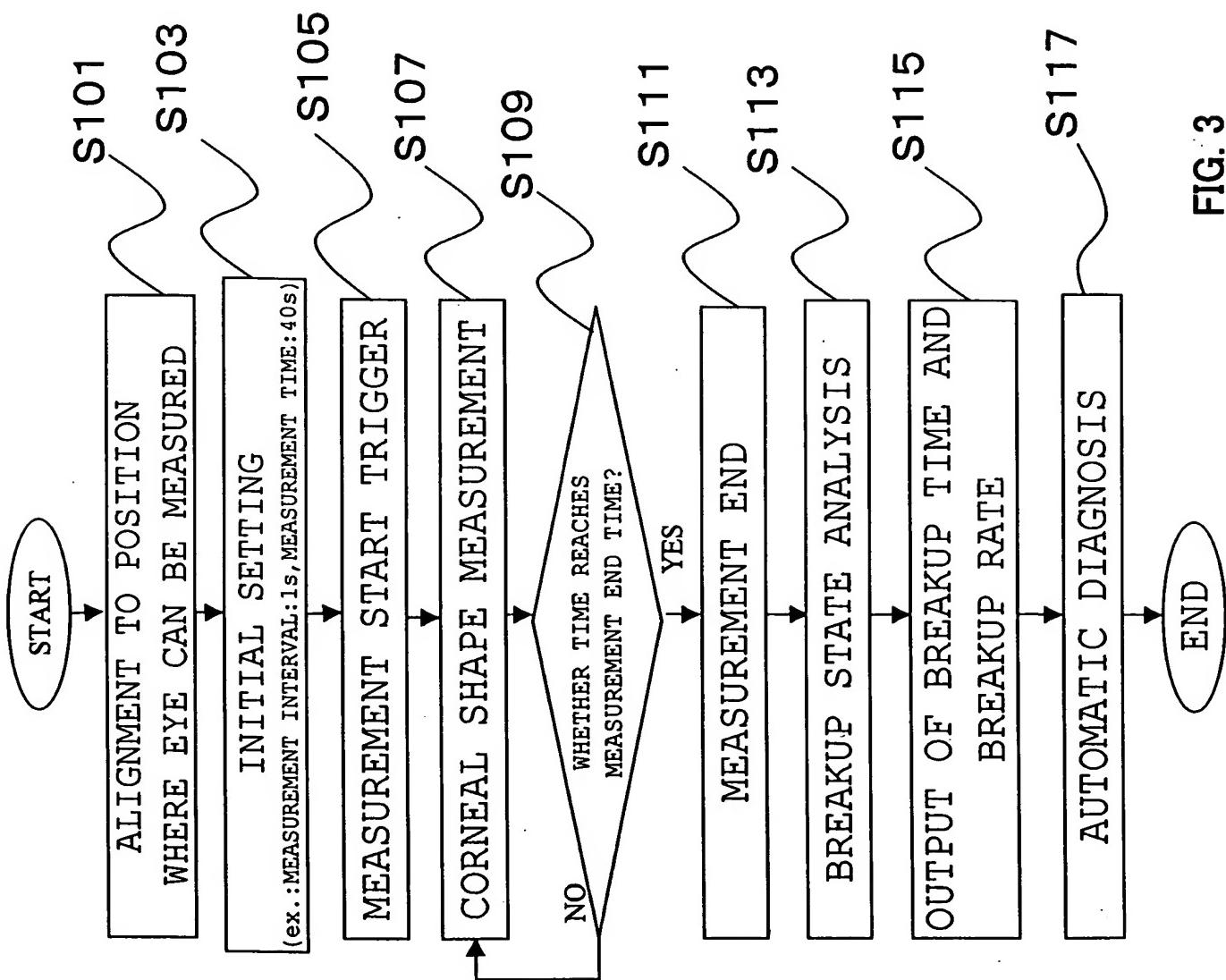


FIG. 3

4 / 22

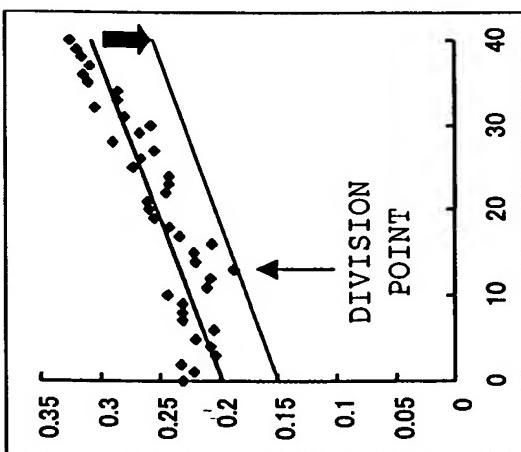
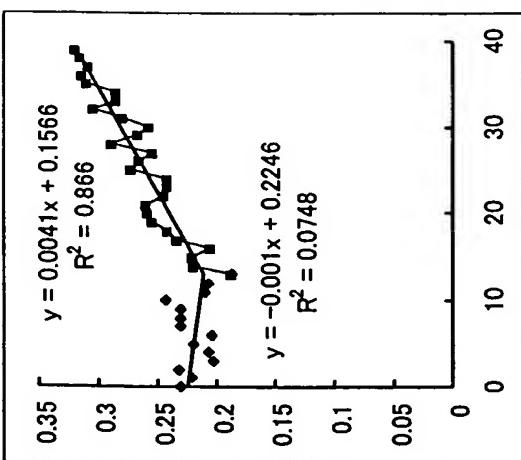
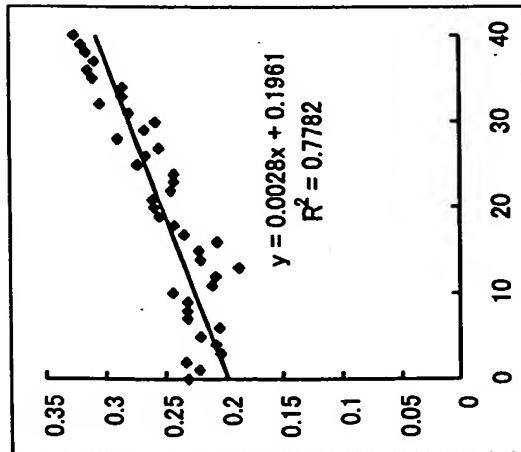


FIG. 4



5 / 22

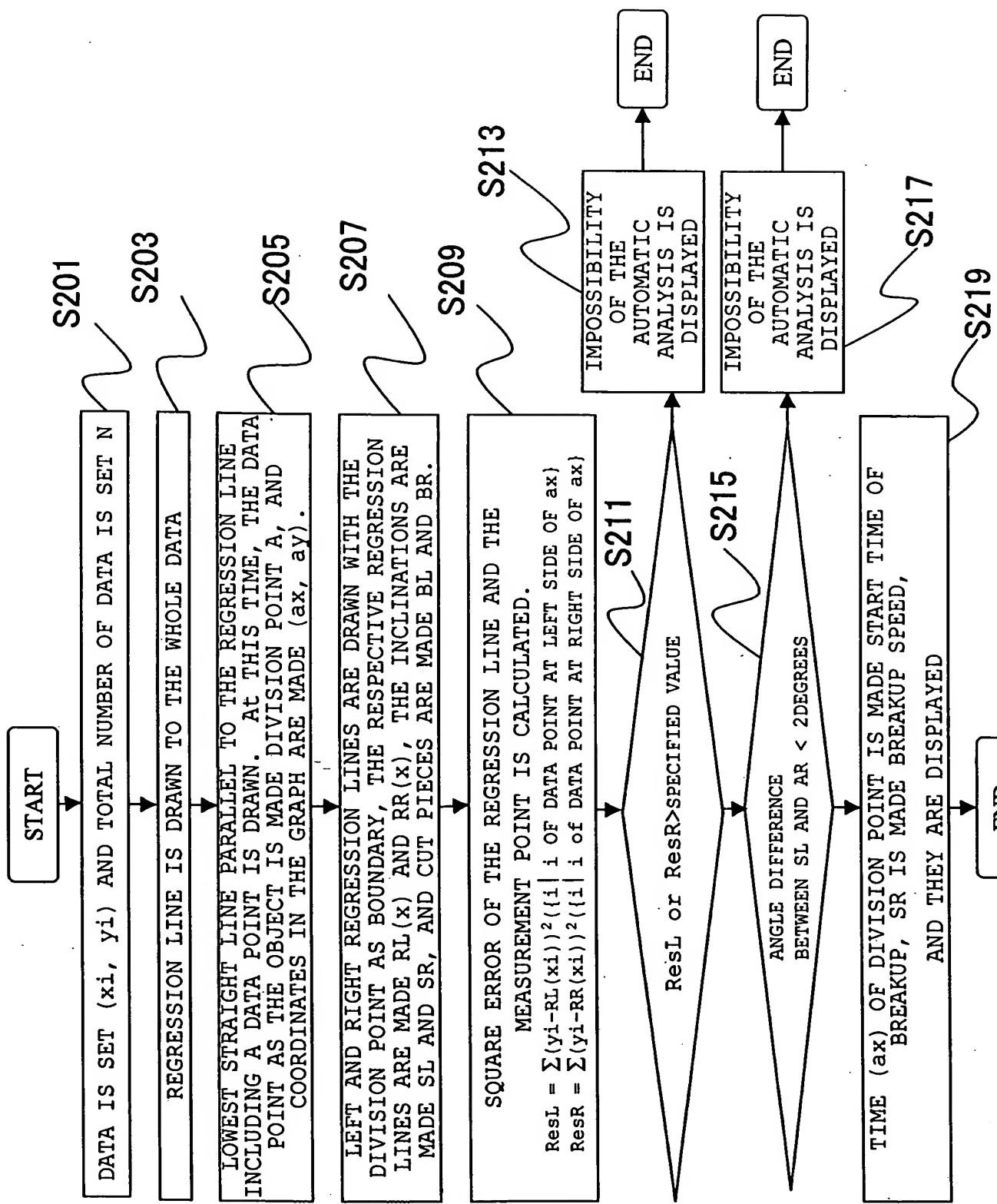
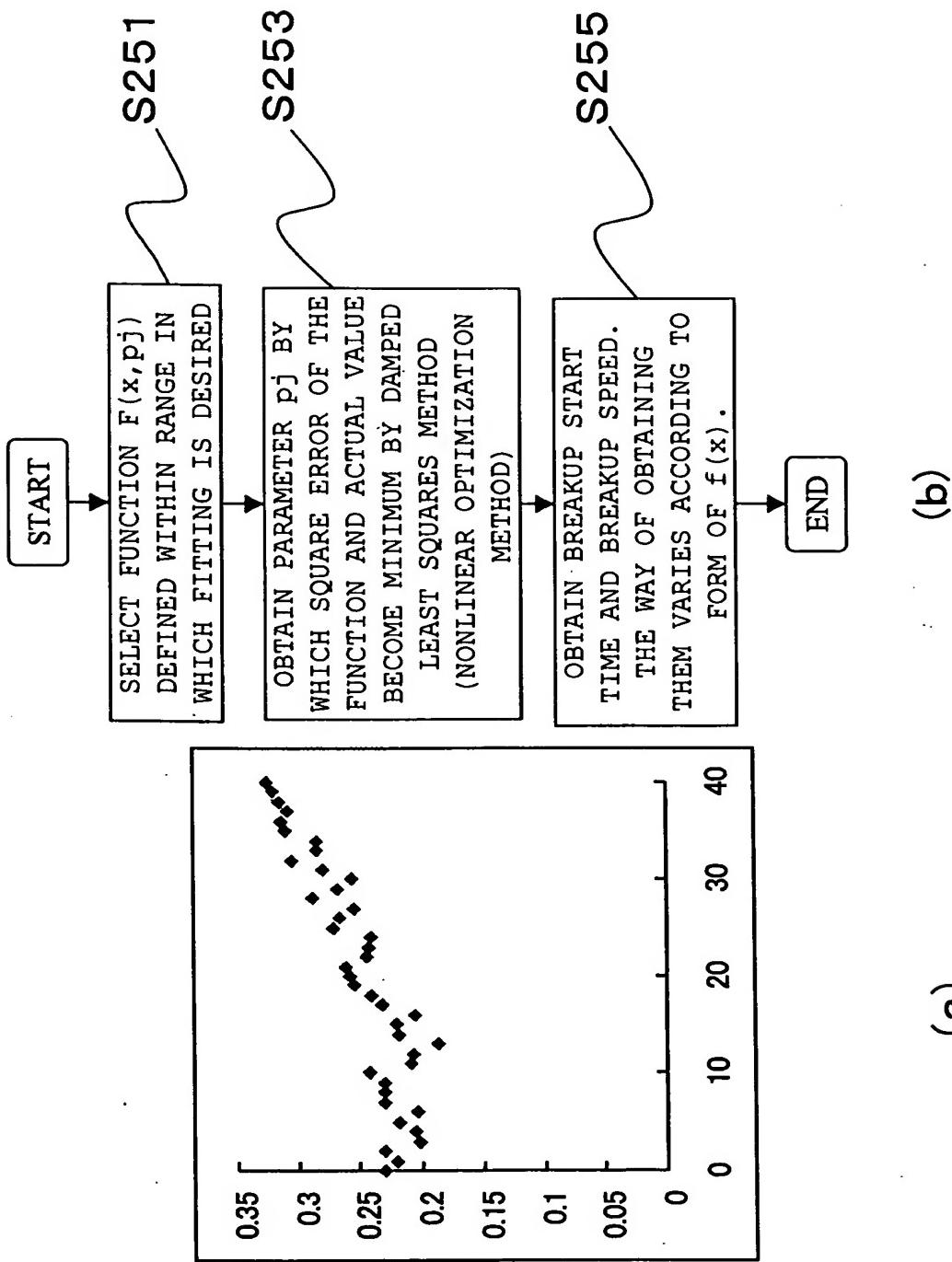


FIG. 5

6 / 22

APPROXIMATION TO FUNCTION $f(x)$



7 / 22

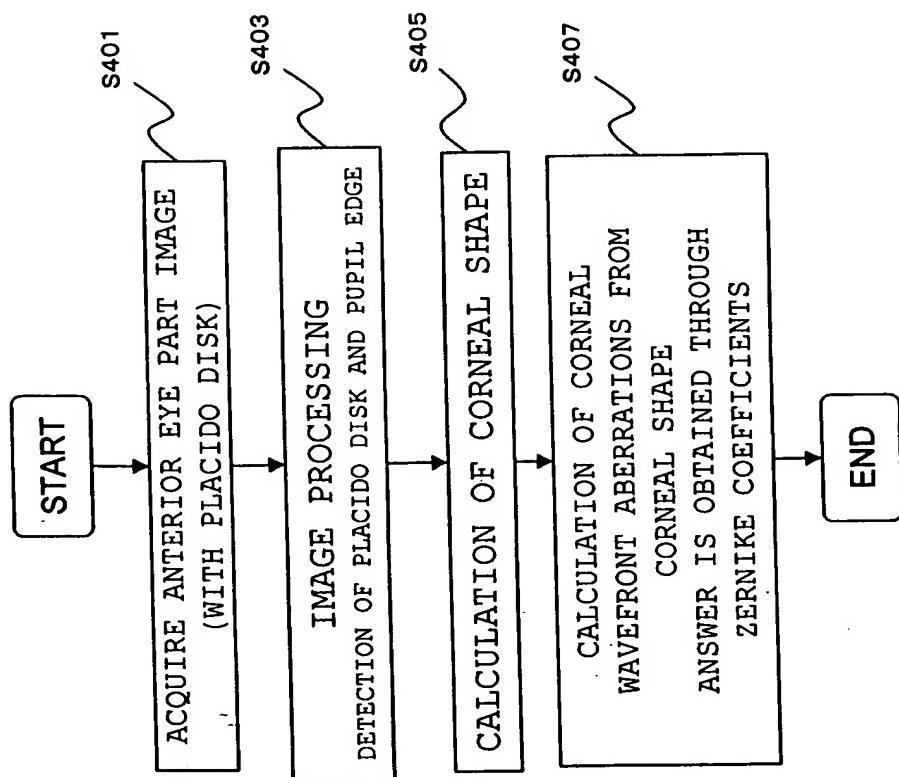


FIG. 7

Title: OPHTHALMOLOGIC
APPARATUS
Inventor(s): Toshifumi MIHASHI et al.
Appl. No.: 10/758,285
REPLACEMENT SHEET

8/22

BEST AVAILABLE COPY

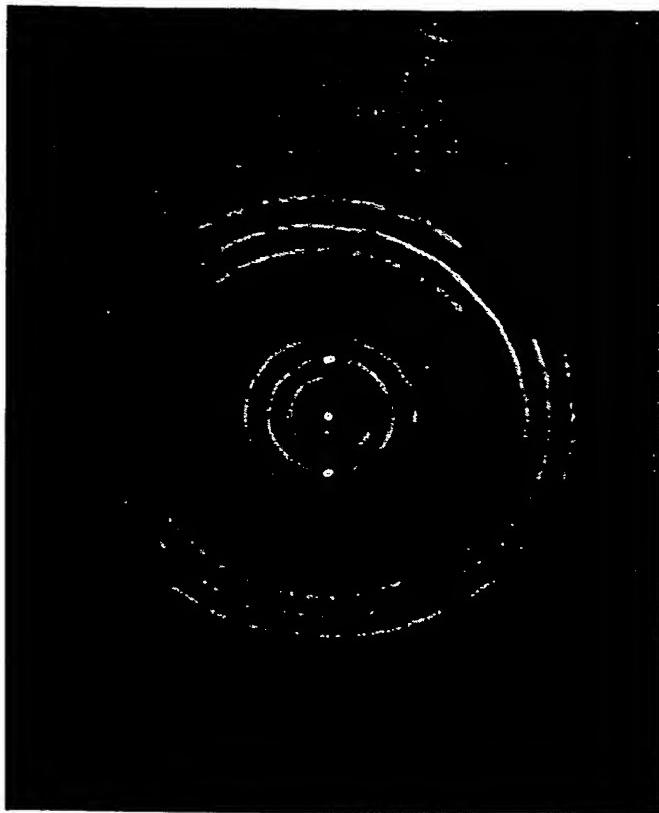


FIG. 8B

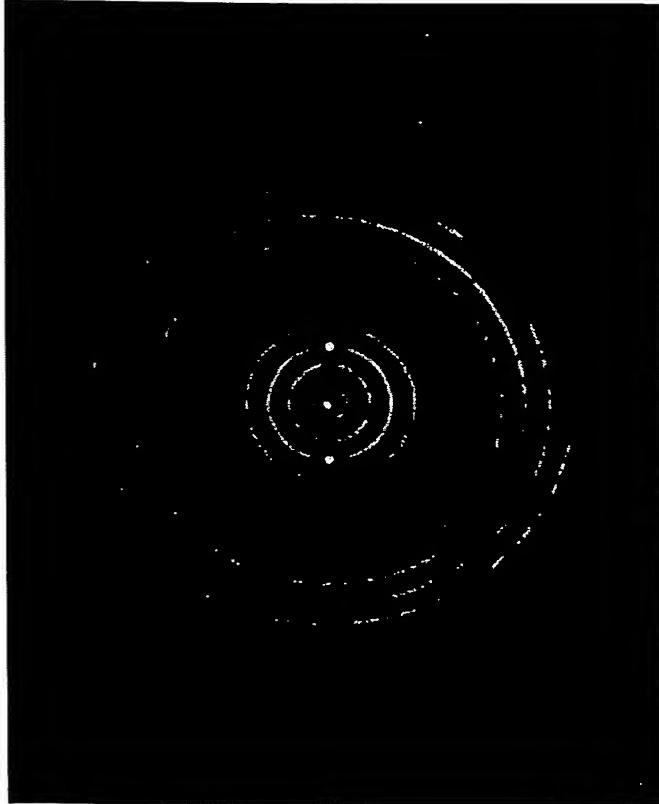


FIG. 8A

9 / 22

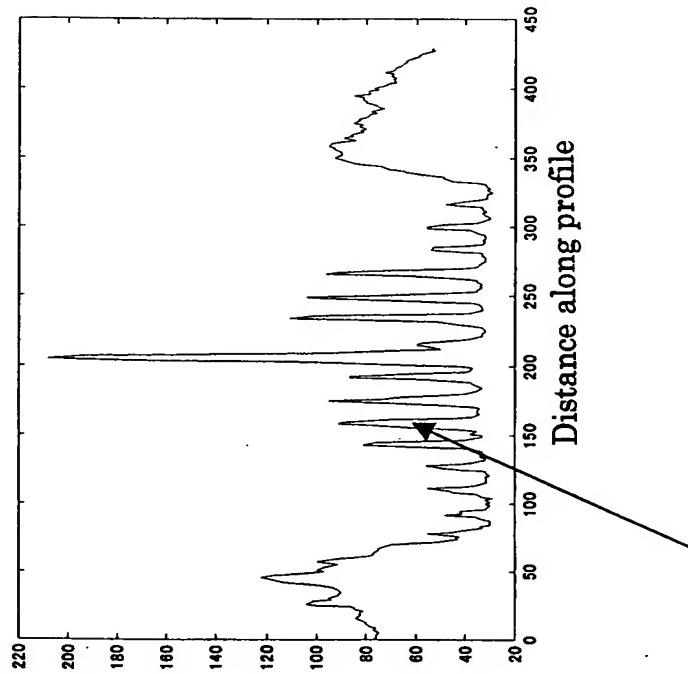


FIG. 9B

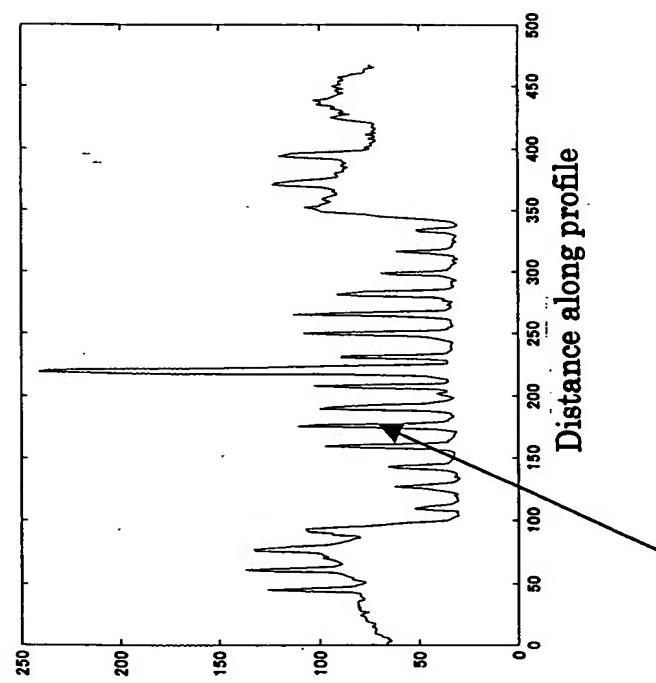


FIG. 9A

10 / 22

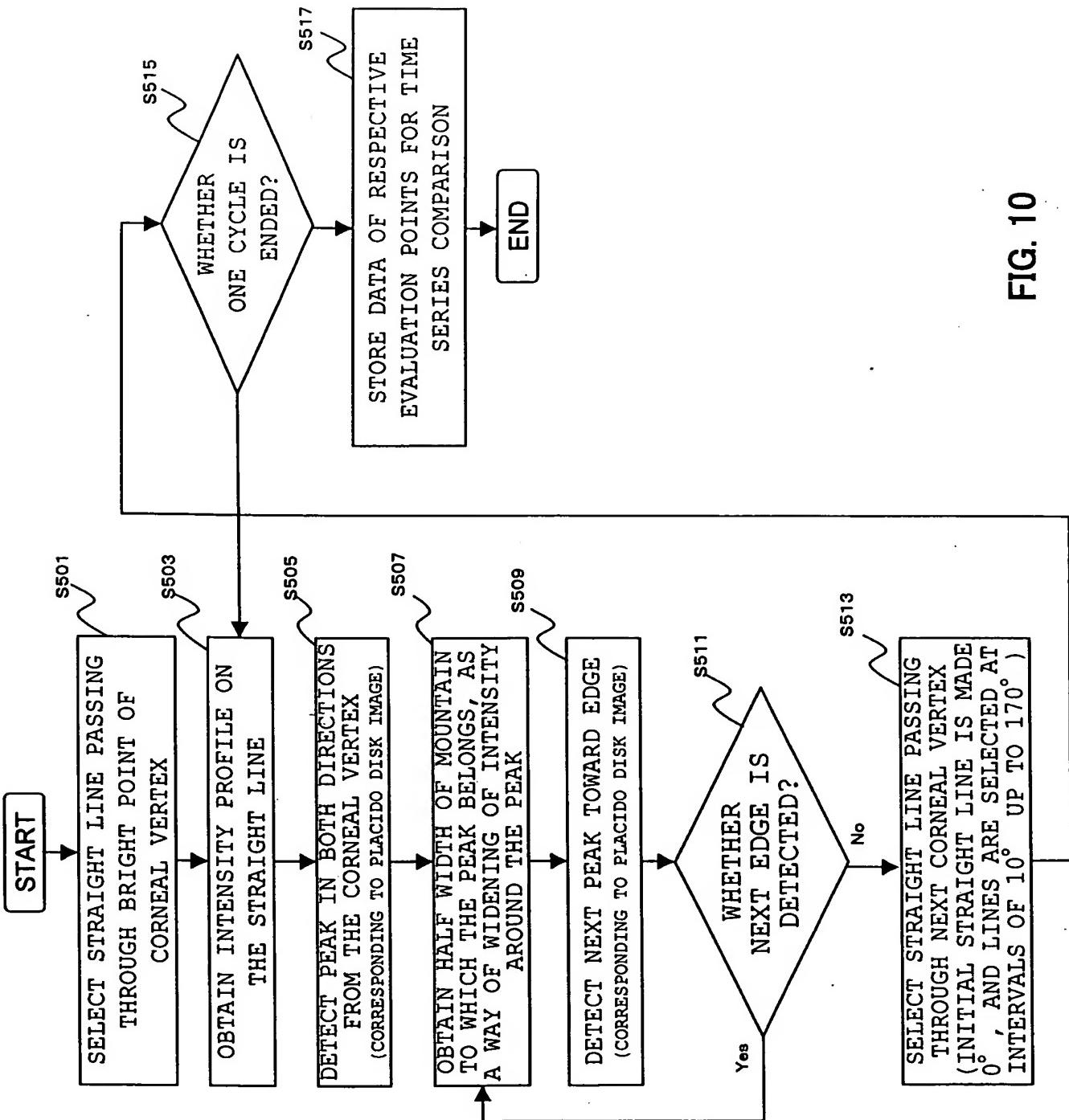


FIG. 10

Title: OPHTHALMOLOGIC
APPARATUS

Inventor(s): Toshifumi MIHASHI et al.
Appl. No.: 10/758,285
REPLACEMENT SHEET

BEST AVAILABLE COPY
11/22

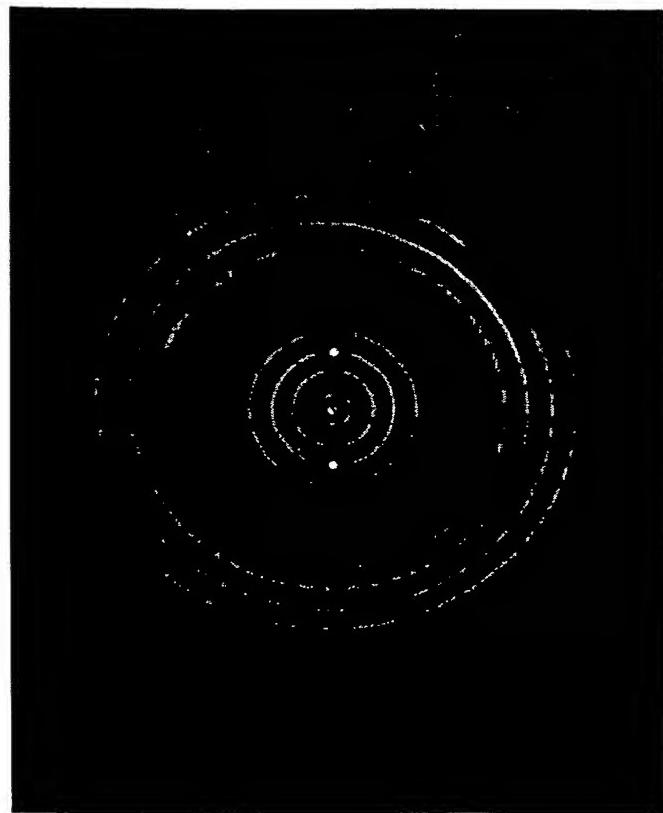


FIG. 11

12/22

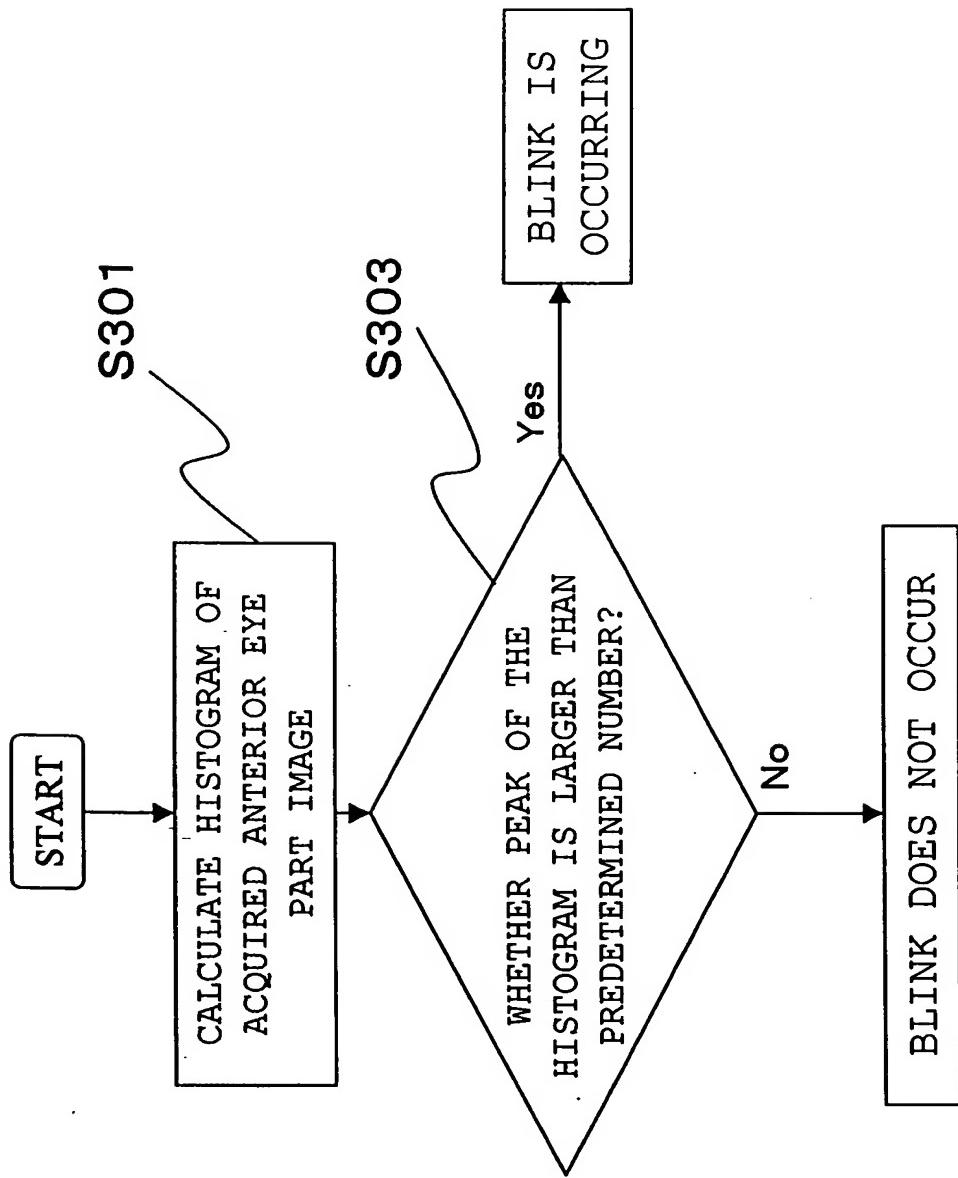


FIG. 12

Title: OPHTHALMOLOGIC
APPARATUS
Inventor(s): Toshifumi MIHASHI et al.
Appl. No.: 10/758,285
REPLACEMENT SHEET

13/22

BEST AVAILABLE COPY

FIG. 13A

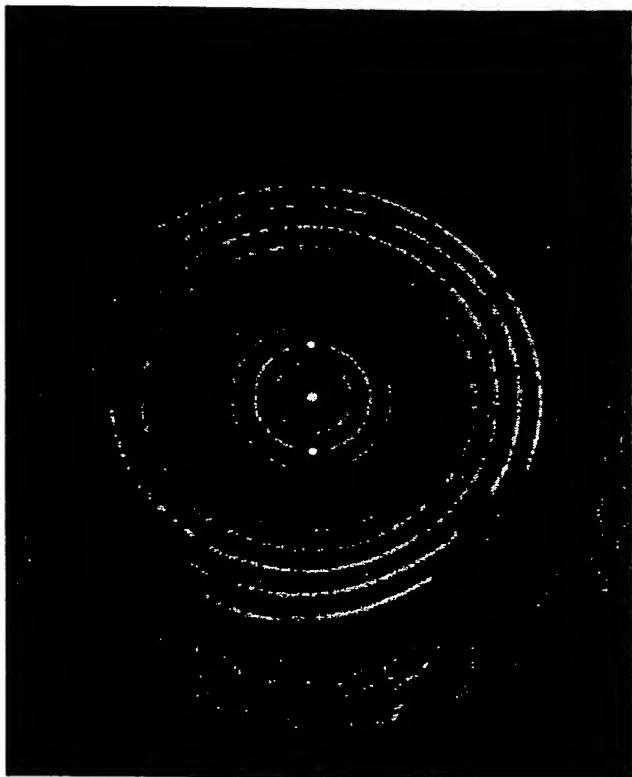
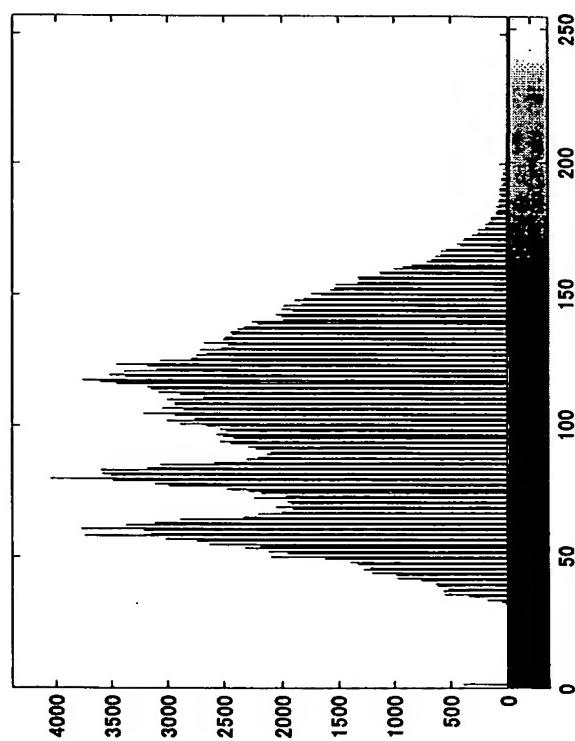


FIG. 13B



Title: OPHTHALMOLOGIC
APPARATUS

Inventor(s): Toshifumi MIHASHI et al.

Appl. No.: 10/758,285

REPLACEMENT SHEET

BEST AVAILABLE COPY

14/22

FIG. 14A

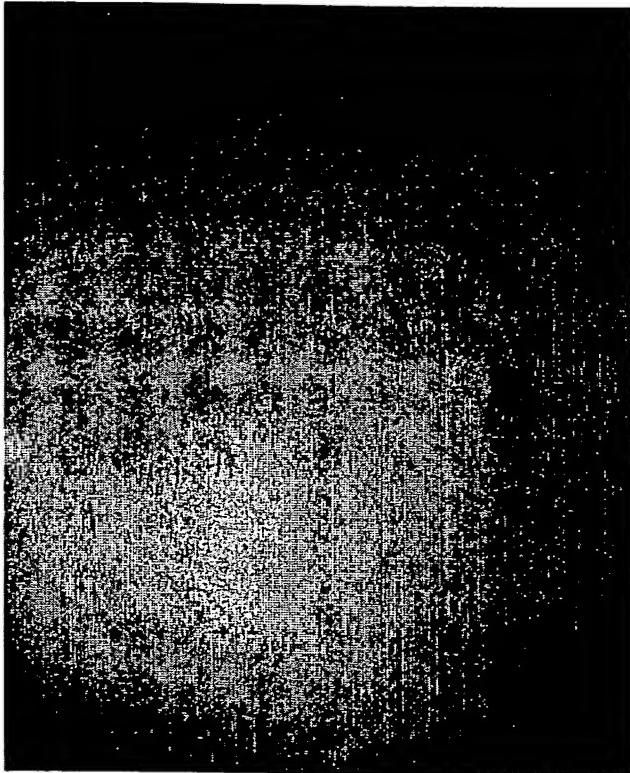
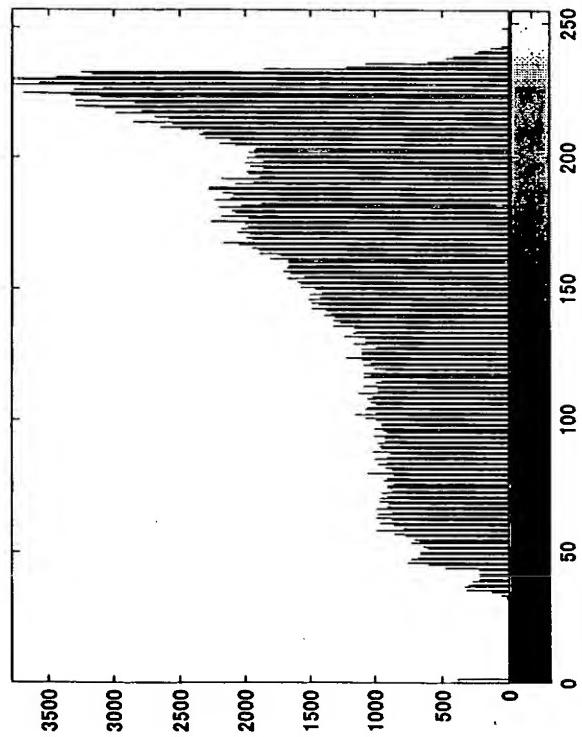


FIG. 14B



15 / 22

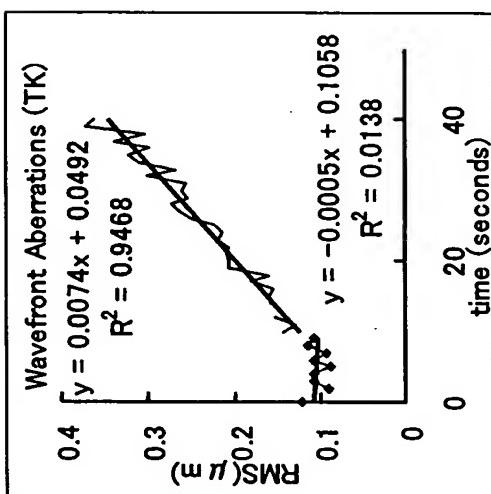
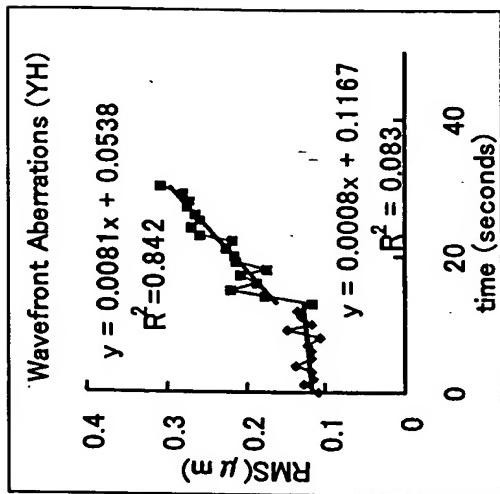
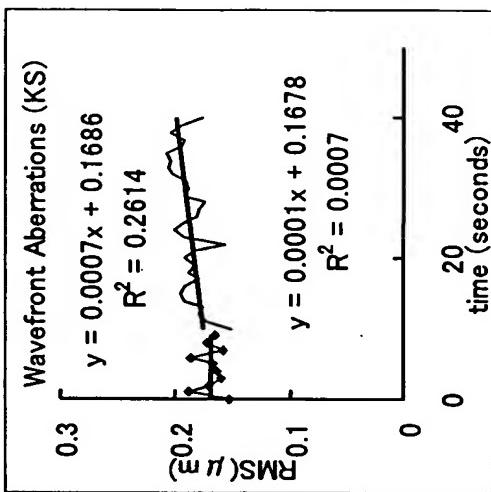
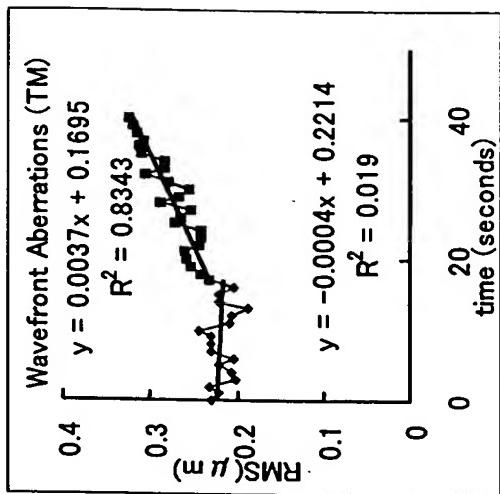


FIG. 15

16/22

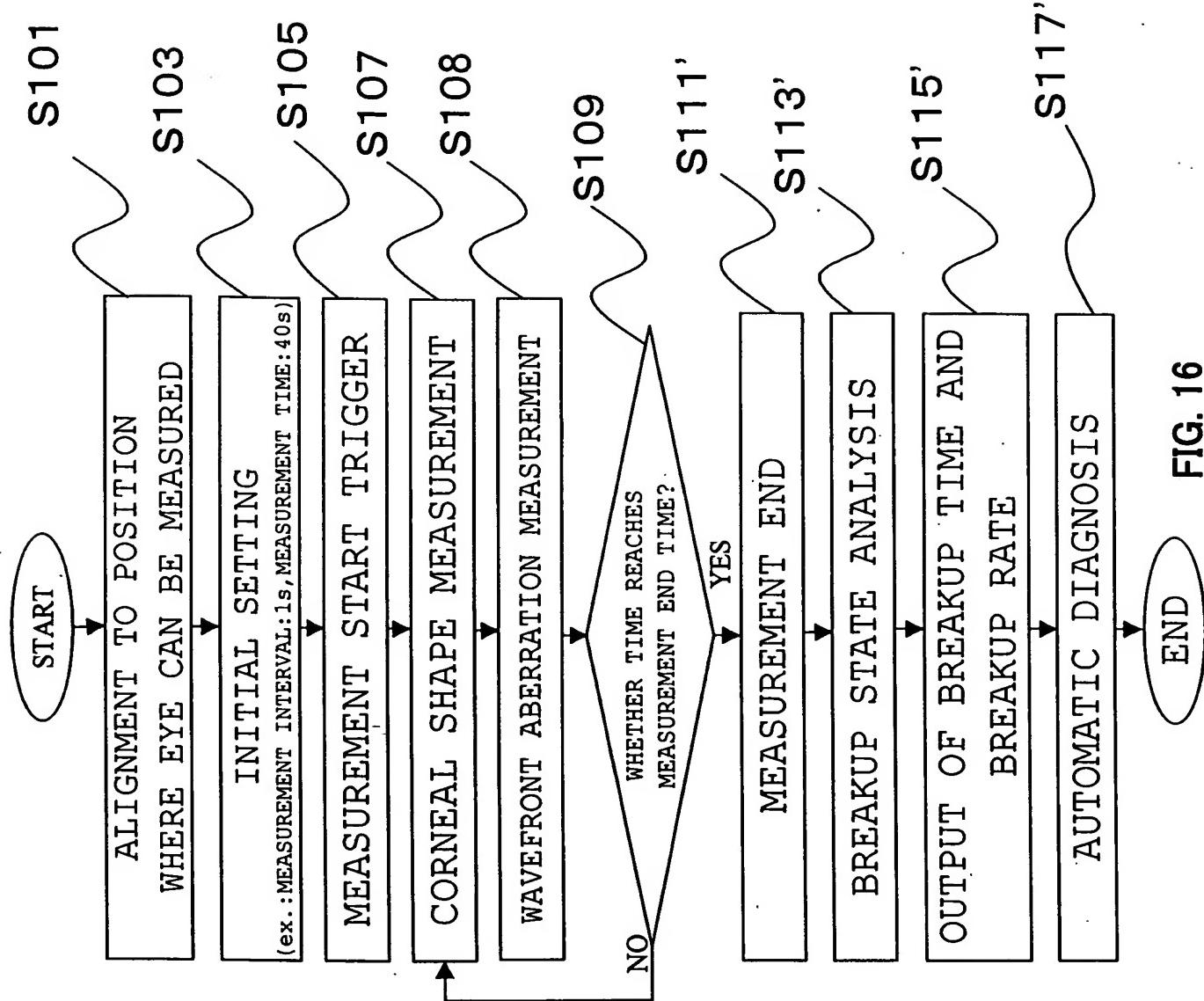


FIG. 16

Title: OPHTHALMOLOGIC
APPARATUS
Inventor(s): Toshifumi MIHASHI et al.
Appl. No.: 10/758,285
REPLACEMENT SHEET

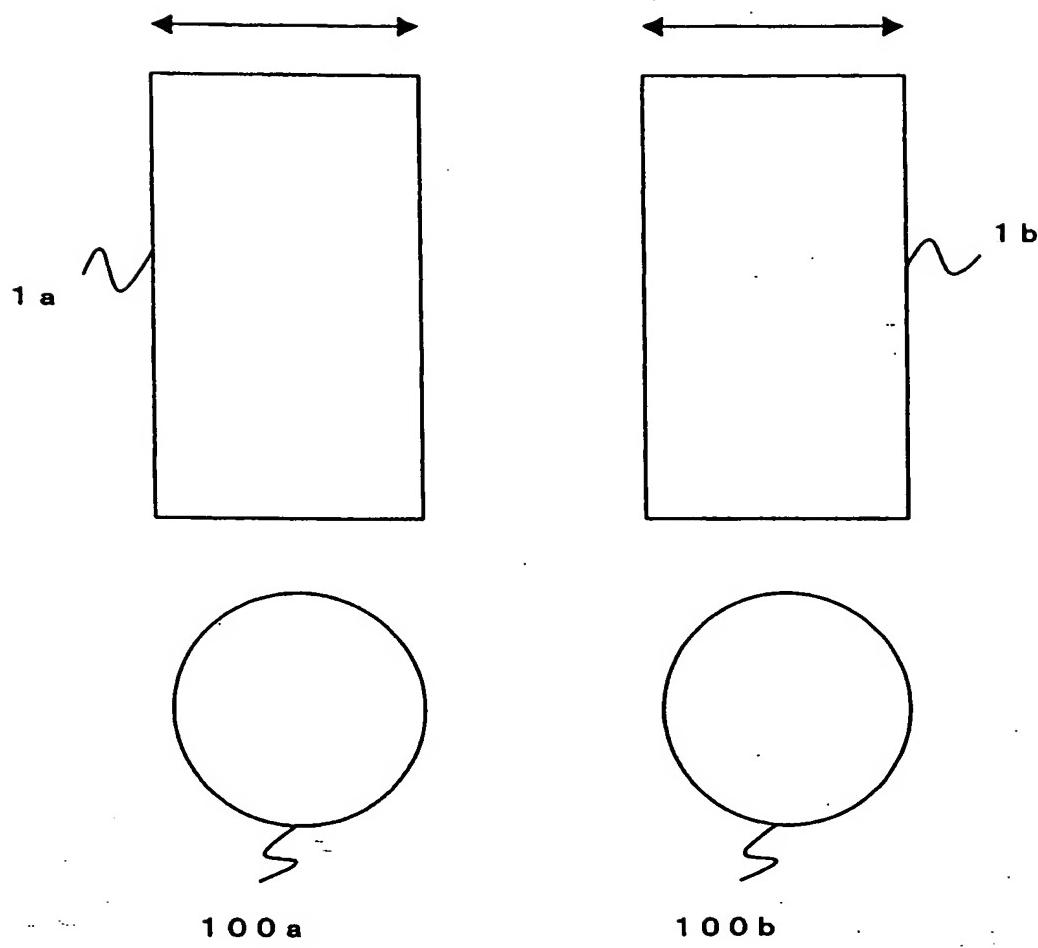


FIG. 17

Title: OPHTHALMOLOGIC
APPARATUS
Inventor(s): Toshifumi MIHASHI et al.
Appl. No.: 10/758,285
REPLACEMENT SHEET

i 2 j - i

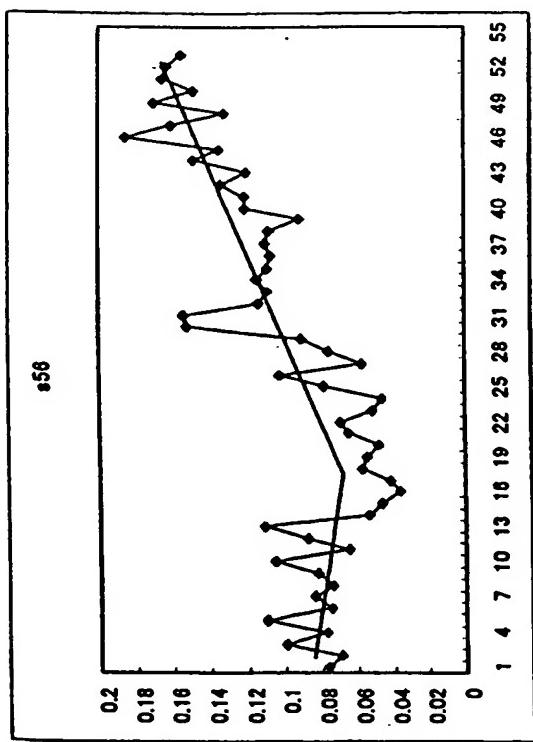
0 0	1
1 - 1	$r \sin(t)$
1 1	$\cos(t) r$
2 - 2	$r^2 \sin(2t)$
2 0	$2r^2 - 1$
2 2	$r^2 \cos(2t)$
3 - 3	$r^3 \sin(3t)$
3 - 1	$(3r^3 - 2r) \sin(t)$
3 1	$(3r^3 - 2r) \cos(t)$
3 3	$r^3 \cos(3t)$
4 - 4	$r^4 \sin(4t)$
4 - 2	$(4r^4 - 3r^2) \sin(2t)$
4 0	$6r^4 - 6r^2 + 1$
4 2	$(4r^4 - 3r^2) \cos(2t)$
4 4	$r^4 \cos(4t)$
5 - 5	$r^5 \sin(5t)$
5 - 3	$(5r^5 - 4r^3) \sin(3t)$
5 - 1	$(10r^5 - 12r^3 + 3r) \sin(t)$
5 1	$(10r^5 - 12r^3 + 3r) \cos(t)$
5 3	$(5r^5 - 4r^3) \cos(3t)$
5 5	$r^5 \cos(5t)$
6 - 6	$r^6 \sin(6t)$
6 - 4	$(6r^6 - 5r^4) \sin(4t)$
6 - 2	$(15r^6 - 20r^4 + 6r^2) \sin(2t)$
6 0	$20r^6 - 30r^4 + 12r^2 - 1$
6 2	$(15r^6 - 20r^4 + 6r^2) \cos(2t)$
6 4	$(6r^6 - 5r^4) \cos(4t)$
6 6	$r^6 \cos(6t)$

FIG. 18

Title: OPHTHALMOLOGIC
APPARATUS
Inventor(s): Toshifumi MIHASHI et al.
Appl. No.: 10/758,285
REPLACEMENT SHEET

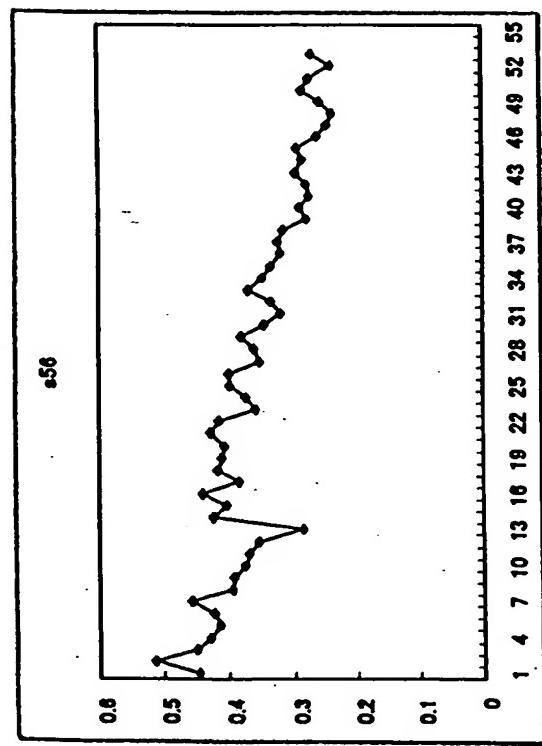
i	j - i	
0	0	1
1	-1	y
1	1	x
2	-2	2yx
2	0	$2x^2 + 2y^2 - 1$
2	2	$x^2 - y^2$
3	-3	$3yx^2 - y^3$
3	-1	$3yx^2 + 3y^3 - 2y$
3	1	$3x^3 + 3xy^2 - 2x$
3	3	$x^3 - 3xy^2$
4	-4	$4yx^3 - 4y^3x$
4	-2	$8yx^3 + 8y^3x - 6yx$
4	0	$6x^4 + 12x^2y^2 + 6y^4 - 6x^2 - 6y^2 + 1$
4	2	$4x^4 - 4y^4 - 3x^2 + 3y^2$
4	4	$x^4 - 6x^2y^2 + y^4$
5	-5	$5yx^4 - 10y^3x^2 + y^5$
5	-3	$15yx^4 + 10y^3x^2 - 5y^5 - 12yx^2 + 4y^3$
5	-1	$10yx^4 + 20y^3x^2 + 10y^5 - 12yx^2 - 12y^3 + 3y$
5	1	$10x^5 + 20x^3y^2 + 10xy^4 - 12x^3 - 12xy^2 + 3x$
5	3	$5x^5 - 10x^3y^2 - 15xy^4 - 4x^3 + 12xy^2$
5	5	$x^5 - 10x^3y^2 + 5xy^4$
6	-6	$6yx^5 - 20y^3x^3 + 6y^5x$
6	-4	$24yx^5 - 24y^5x - 20yx^3 + 20y^3x$
6	-2	$30yx^5 + 60y^3x^3 + 30y^5x - 40yx^3 - 40y^3x + 12yx$
6	0	$20x^6 + 60x^4y^2 + 60x^2y^4 + 20y^6 - 30x^4 - 60x^2y^2 - 30y^4 + 12x^2 + 12y^2 - 1$
6	2	$15x^6 + 15x^4y^2 - 15x^2y^4 - 15y^6 - 20x^4 + 20y^4 + 6x^2 - 6y^2$
6	4	$6x^6 - 30x^4y^2 - 30x^2y^4 + 6y^6 - 5x^4 + 30x^2y^2 - 5y^4$
6	6	$x^6 - 15x^4y^2 + 15x^2y^4 - y^6$

FIG. 19



FIFTH AND SIXTH ABERRATIONS

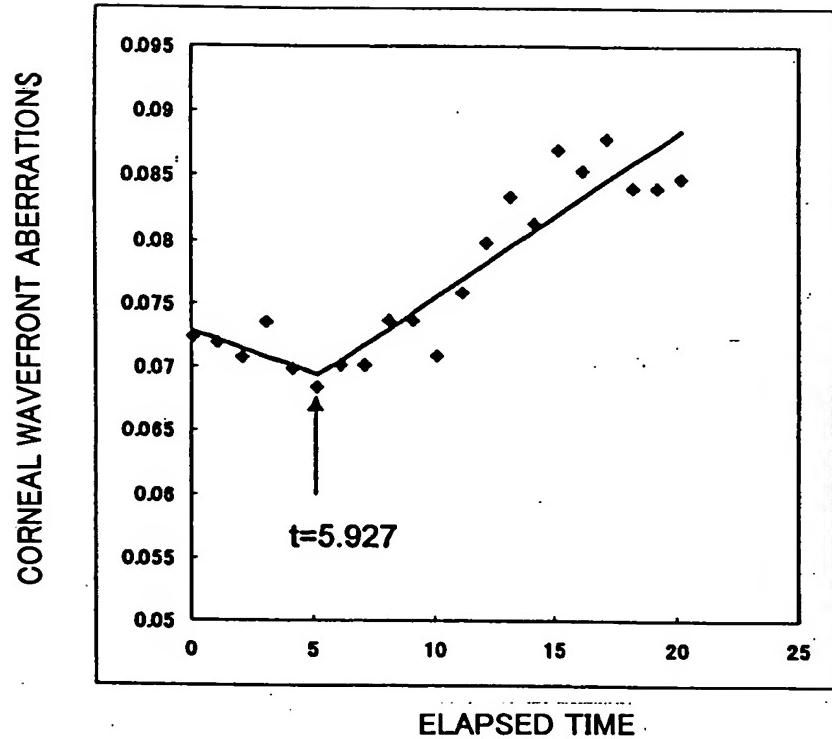
FIG. 20B



THIRD AND FOURTH ABERRATIONS

FIG. 20A

21 / 22



CORNEAL WAVEFRONT ABERRATION = $\begin{cases} -0.00418(r-5.927)+0.09299, & \text{for } r < 5.927, \\ 0.00458(r-5.927)+0.09299, & \text{for } r \geq 5.927. \end{cases}$

FIG. 21

22/22

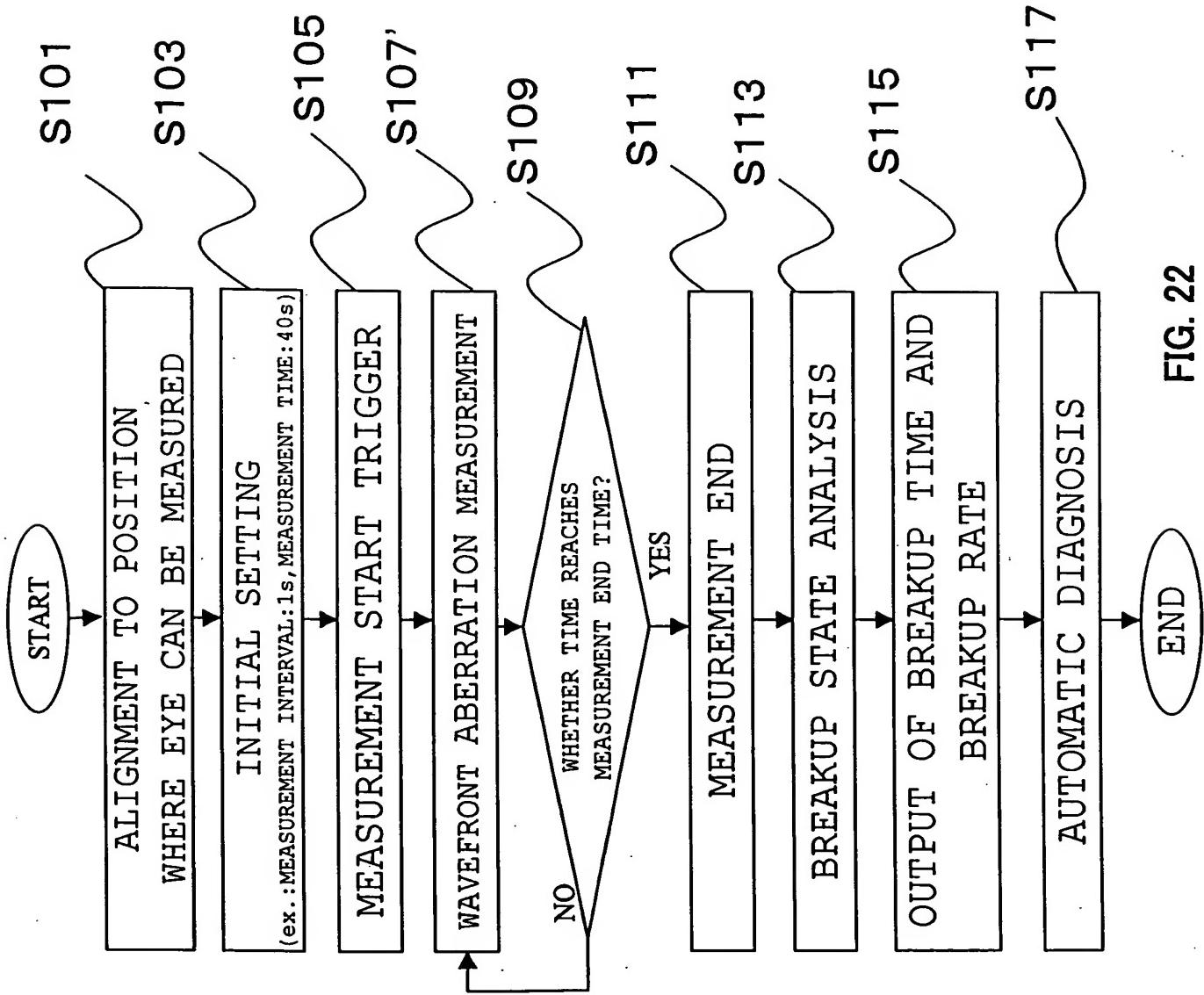


FIG. 22